

REMARKS

By this Amendment, the claims have been rewritten to reduce the multiple dependencies and to place the claims in better conformance with US practice.

Further and favorable action is respectfully solicited.

Respectfully submitted,

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ATTACHMENT A
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) A unit for transferring power in an inductive manner to at least one power-receiving device, the unit being provided with a plurality of electrical coils, the electrical coils not all being of the same shape.
2. (Original) A unit as claimed in claim 1, wherein the electrical coils are not all of the same size and/or do not all enclose the same dimensional area.
3. (Original) A unit for transferring power in an inductive manner to at least one power-receiving device, the unit being provided with a plurality of electrical coils, the electrical coils not all being of the same size and/or not all enclosing the same dimensional area.
4. (Original) A unit as claimed in claim 3, wherein the electrical coils are not all of the same shape.
5. (Currently Amended) A unit as claimed in ~~any preceding claim 1~~, wherein at least one of the electrical coils comprises a simple conductive loop.
6. (Currently Amended) A unit as claimed in ~~any preceding claim 1~~, wherein at least one of the electrical coils comprises a complex arrangement of conductors defining a charging region on which a power-receiving device may be placed.
7. (Currently Amended) A unit as claimed in ~~any preceding claim 1~~, wherein all of the electrical coils have mutually different shapes and/or sizes and/or enclose mutually different dimensional areas.

8. (Currently Amended) A unit as claimed in ~~any one of claims 1 to 6~~claim 1, wherein two or more of the electrical coils have the same size and/or shape and/or enclose the same dimensional area.

9. (Original) A unit as claimed in claim 8, wherein one or more of the remaining coils have one or more different shapes and/or sizes and/or enclose different dimensional areas than the said two or more of the electrical coils.

10. (Currently Amended) A unit as claimed in ~~any preceding claim~~claim 1, wherein the electrical coils are spatially separated from each other such that no coil is enclosed within or overlaps any other coil.

11. (Currently Amended) A unit as claimed in ~~any one of claims 1 to 9~~claim 1, wherein one or more smaller coils are contained within a boundary of one or more larger coils.

12. (Currently Amended) A unit as claimed in ~~any one of claims 1 to 9 and 11~~claim 1, wherein one or more coils overlap with one or more other coils.

13. (Original) A unit as claimed in claim 11, wherein the smaller coils contained within a boundary of at least one larger coil are arranged in a substantially concentric or nested configuration.

14. (Original) A unit as claimed in claim 11, wherein the smaller coils contained within the boundary of at least one larger coil are arranged such that the smaller coils do not overlap each other or are not contained within each other.

15. (Original) A unit as claimed in claim 11, wherein some of the smaller coils contained within the boundary of at least one larger coil have a nested configuration, and wherein some other of the said smaller coils are do not have a nested configuration within the same boundary.

16. (Currently Amended) A unit as claimed in ~~any preceding claim 1~~, wherein the unit is provided with means for selectively activating one or more of the electrical coils in order to provide efficient power transfer to power-receiving devices of different sizes and/or power requirements and/or positions or rotations.

17. (Original) A unit for transferring power in an inductive manner to at least one power-receiving device, the unit being provided with at least one plurality of nested electrical coils and also with means for selectively activating one or more of the nested electrical coils so as to be adaptable to provide efficient power transfer to power-receiving devices of different sizes and/or power requirements and/or positions/rotations.

18. (Original) A unit as claimed in claim 17, wherein at least one of the electrical coils comprises a simple conductive loop.

19. (Currently Amended) A unit as claimed in any claim 17 or 18, wherein at least one of the electrical coils comprises a complex arrangement of conductors defining a charging region on which a power-receiving device may be placed.

20. (Currently Amended) A unit as claimed in claim 17, wherein there is provided four nested sets of electrical coils, each having a substantially right-angled triangular shape, and arranged such that the right-angles of the four sets of coils all point towards a single origin point such that the four sets of nested coils have an overall substantially square or rectangular configuration.

21. (Original) A unit as claimed in claim 20, wherein, in operation, adjacent sets of coils are driven in antiphase so as to cause rotation of a resulting electromagnetic field about the origin point.

22. (Original) A unit for transferring power in an inductive manner to at least one power-receiving device, the unit being provided with an even number of electrical coils each having a corner portion, the coils being arranged such that the corner portions all point towards an origin

point, and wherein, in operation, adjacent coils are driven in antiphase so as to cause rotation of a resulting electromagnetic field about the origin point.

23. (Original) A unit as claimed in claim 22, the unit being provided with four coils.

24. (Currently Amended) A unit as claimed in claim 22 ~~or 23~~, wherein each coil has a substantially right-angled triangle shape or a quarter circular shape.

25. (Currently Amended) A system for contact-less power transfer, comprising a unit as claimed in ~~any one of claims 1 to 25~~ claim 1 and a discrete power-receiving device including a secondary coil for coupling inductively with the least one coil of the unit.

26. (Original) A system for contact-less power transfer, the system comprising a power-transmitting unit provided with a primary coil and at least one power-receiving device incorporating a secondary coil, wherein the primary coil is generally elongate along an x-axis with respect to an orthogonal y-axis, and wherein the secondary coil is sized so as to be sufficiently similar in size to the primary coil with respect to the y-axis so as to provide efficient power transfer, but smaller in size with respect to the x-axis so as to provide a translational degree of freedom of movement along the x-axis.

27. (Original) A system as claimed in claim 26, wherein an extent of the primary coil along the x-axis is at least twice, advantageously at least three or four times, that of the secondary coil along the x-axis.

28. (Original) A system for contact-less power transfer, the system comprising a power-transmitting unit provided with at least one primary coil having a boundary portion and at least one power-receiving device incorporating a secondary coil, wherein power transfer takes place by way of coupling of near-field flux flowing about the boundary portion of the at least one primary coil with windings of the secondary coil.

29. (Original) A system as claimed in claim 28, comprising a plurality of adjacent primary coils enabling a plurality of power-receiving devices to receive power simultaneously.

30. (Currently Amended) A system as claimed in claim 28 ~~or 29~~, wherein the at least one primary coil is generally rectangular in shape, so as to provide is one linear degree of freedom of movement of the secondary coil.

31. (Currently Amended) A system as claimed in claim 28 ~~or 29~~, wherein the at least one primary coil is substantially circular or elliptical or the like, so as to provide a rotational degree of freedom of movement of the secondary coil.

32. (Original) A system for contact-less power transfer, the system comprising a power-transmitting unit provided with first and second substantially concentric primary coils, the first being larger than the second, and at least one power-receiving device incorporating at least one secondary coil dimensioned so as to correspond to a distance between the first and second primary coils, wherein power transfer takes place by way of coupling of near-field flux flowing about the boundaries of the first and second primary coils with generally opposed edges of the secondary coil.

33. (Original) A system as claimed in claim 32, wherein the first and second primary coils, in operation, are supplied with currents flowing in opposite directions.

34. (Currently Amended) A system as claimed in claim 32 ~~or 33~~, wherein the primary coils are generally circular or elliptical or the like.

35. (Currently Amended) A unit as claimed in ~~any one of claims 1 to 24~~ claim 1, wherein the at least one coil is incorporated in a laminar charging pad upon which a power-receiving device may be placed.

36. (Original) A unit as claimed in claim 35, wherein the charging pad is substantially planar.

37. (Currently Amended) A system as claimed in ~~any one of claims 25 to 34~~ claim 25, wherein the at least one coil is incorporated in a laminar charging pad upon which the power-receiving device may be placed.

38. (Original) A system as claimed in claim 37, wherein the charging pad is substantially planar.

39. (Cancelled)

40. (Cancelled)